

## **REMARKS**

No claims have been amended.

### **1. Rejection under 35 U.S.C. 102(e)**

Claims 1, 3, 4, 6 and 16 remain rejected as allegedly anticipated by Sotoyama.

Applicants maintain that Sotoyama does not disclose or suggest Applicants' invention as recited in claim 1. As submitted in the previously filed response, the blocking layer referred to in claim 1 of Applicants' invention has the function of blocking conduction – *i.e.*, movement of **any type** of charge into the electroluminescent (EL) layer. As a consequence, the blocking layer creates a contrast in the image displayed by the EL layer as there is no emission in the regions where it is printed.

Applicants' blocking layer and its purpose are different from conventional hole or electron blocking layers as typically used in OLED devices. These layers block only movement of one type of charge – *i.e.*, either negative charge (electrons) or positive charge (holes), but will allow movement of the opposite type of charge into the EL layer. These layers, therefore, do not completely block conduction and movement of charge. Furthermore, the purpose of these layers is to enhance injection of one type of charge from each direction into the EL layer and prevent recombination of positive and negative charges outside the EL layer, in order to improve the light-emitting efficiency. They will not, therefore, create a contrasting image by preventing emission in the regions where they are applied, but will instead increase the luminence.

In the "Response to Arguments" section of the current Office Action (page 11), the Examiner disagrees with Applicants' submission that Sotoyama does not teach a patterned blocking layer that prevents conduction and movement of charge into the EL layer. The Examiner asserts that "Sotoyama teaches an electron blocking layer that prevents conduction (the electron is needed for conduction) and movement of charge (the charge of the electron) into the EL layer." Applicants point out that the blocking layer recited in Applicants' claim 1 blocks both negative and positive charges. Representative support for this aspect of Applicants' invention may be found in the Claim 1 recitation that the blocking layer "prevents conduction and movement of charge in the electroluminescent layer..." without mentioning a specific type of charge. In contrast to Applicants' claimed invention, Sotoyama teaches a hole transporting layer which blocks only the movement of negative charges (electrons), while at the same time, allowing the movement of positive charges

(holes). Since Sotoyama does not teach all of the features of Applicants' claim 1, Sotoyama cannot anticipate Applicants' claim 1.

In addition, Applicants' claim 1 recites that the blocking layer is printed in "a desired pattern between two of the OLED layers" which means that it is only present in specific areas of the OLED device. Consequently, conductivity is reduced and charge movement prevented only in the areas of said pattern, but not outside these areas. Sotoyama does not teach this feature of Applicants' claimed invention. The Examiner asserts that Sotoyama discloses that the hole transporting layer prevents movement of charge in a desired pattern because Sotoyama discloses in paragraph 0015 that the hole transporting layer can be prepared by a printing method and that printing forms patterns. Applicants respectfully disagree with this portrayal of Sotoyama and submit that printing in of itself does not necessarily form patterns. It is also possible to use a printing method to provide a continuous layer. However, Sotoyama does not disclose that the hole transporting layer is printed in such a way that it forms a desired pattern within the OLED device. Therefore, Sotoyama provides no basis for the Examiner's assertion that it discloses a blocking layer that forms a desired pattern and reduces conduction across the OLED in the area of the pattern as recited in Applicants' claim 1.

For at least the above reasons, Applicants therefore respectfully request that this rejection be withdrawn.

**2. Rejection under 35 U.S.C. 103(a)**

Claims 2, 5, 7-15 and 17 are rejected as allegedly obvious over Sotoyama in view of one or more secondary references (Pennaz, Morii, Narang, Hyman, Murasko, Jagannathan and Hanson). As submitted in section 1 above, Sotoyama does not teach or suggest Applicants' claimed invention as recited in claim 1. The secondary references do not remedy the substantive deficiencies of Sotoyama relative to the Applicants' claimed invention. As all of the other claims depend directly or indirectly from claim 1, it is submitted that all of Applicants' claims recite subject matter which is novel and otherwise unobvious from the Examiner's references.

**3. Conclusion**

The foregoing remarks are being made to place the application in condition for allowance. Applicants respectfully request reconsideration and timely allowance of the pending claims. Should an interview be helpful to further prosecution of this application, the Examiner is invited to telephone the undersigned.

Except for issues payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or to credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a constructive petition for extension of time in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,

MORGAN LEWIS & BOCKIUS LLP

By           /Gregory T. Lowen/          

Gregory T. Lowen  
Reg. No. 46,882

Date: April 17, 2009

**Customer No. 09629**

1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
Phone: (202) 739-3000  
Facsimile: (202) 739-3001  
Direct: (202) 739-5455